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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,058	08/30/2001	Jack Yiu-Bun Lee	CUH-004-.01	8335

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EXAMINER	
USTARIS, JOSEPH G	

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/944,058	LEE, JACK YIU-BUN	
	Examiner	Art Unit	
	Joseph G. Ustaris	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-12,14,16-20,23-26,28,29,31-34,36-39 and 41* is/are rejected.

7)☒ Claim(s) *4-6,13,15,21,22,27,30,35 and 40* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The Brief Description of the Drawings section lacks descriptions for Fig. 4B and 4C.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 7-12, 14, 16-20, 23-26, 28, 29, 31-34, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganek et al. (US005724646A) in view of Brown (US005771435A).

Regarding claim 1, Ganek et al. (Ganek) discloses a "method for providing sequential data blocks having duration", wherein the programs are delivered as MPEG packets that are "sequential data blocks having duration" (See Fig. 5b; column 6 lines 12-25). The system provides "repeated pre-scheduled multicasts of a data block" (See Fig. 5b; column 3 lines 50-65). The system transmits "the front portion of a data block" (See column 3 line 50 – column 4 line 42) and "merges the user into a pre-scheduled multicast of the data block" (See column 5 lines 29-67). Furthermore, the transmission of the "front portion of a data block" is a multicast (See column 5 lines 29-47). However,

Ganek does not disclose "dynamically" transmitting the front portion of the data block in response to a user request.

Brown discloses a system that provides near-video-on-demand (NVOD) and video-on-demand (VOD) services to users. The user is able to request whether they wish to view a program using NVOD or VOD. Upon request for the VOD version of the program, the system transmits the VOD version of the program to the user or "dynamically initiating transmission in response to a user request" (See column 3 lines 31-51). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and transmission of the beginning portion of the programs disclosed by Ganek to be "dynamically transmitted in response to a user request", as taught by Brown, in order to provide a more efficient means of using the available bandwidth thereby freeing up more bandwidth to use for delivering more programs.

Regarding claim 2, the MPEG packets comprises video images viewed "sequentially over time", where inherently the video has a "sequence" and a "duration" thereby making the program or "data block" a "sequential data block having duration".

Regarding claim 3, Ganek et al. (Ganek) discloses a "method for providing videos to users" (See Fig. 5b; column 6 lines 12-25). The system provides "multicasting a video according to a predetermined schedule (first multicast)" (See Fig. 5b; column 3 lines 50-65) and "receives an indication that a user desires to see the video" (See column 5 lines 29-47). The system also transmits the "first portion of the video" (See column 3 line 50 – column 4 line 42) and merges the user viewing the "first portion of

the video" into a "second portion of the video", where the second portion is received from the "first multicast" (See column 5 lines 29-67). However, Ganek does not disclose "dynamically" transmitting the "first portion of the video" in response to a user request in the event that the first multicast will not be timely for the user to receive and view.

Brown discloses a system that provides near-video-on-demand (NVOD) or "first multicasting" and video-on-demand (VOD) or "dynamically initiated transmission" services to users. The user is able to request whether they wish to view a program using NVOD or VOD. The user's request is first fulfilled by a NVOD version of the requested program, however the user may request a VOD version of the program instead in order to provide more functions or inherently reduce the wait time for the video or "acceptably low waiting time" (See column 3 lines 31-51). On the other hand, if the user doesn't mind the wait time for the NVOD version, then the user is served the NVOD version without "needing to receive the dynamically initiated transmission". Upon request for the VOD version of the program, the system transmits the VOD version of the requested program to the user or "dynamically initiating transmission in response to a user request" (See column 3 lines 31-51). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and transmission of the beginning portion of the programs disclosed by Ganek to be "dynamically transmitted in response to a user request" in the event that the NVOD service or "first multicast" will not be timely for the user to receive and view, as taught by Brown, in order to provide a more efficient means of using the available bandwidth thereby freeing up more bandwidth to use for delivering more programs.

Regarding claim 7, once the user receives portions of the video from the "first multicasting", the user does not need to change channel to channel to receive substantially the entire remainder of the video (See Ganek column 5 lines 48-67).

Regarding claim 8, the "predetermined schedule" is inherently established more than "about six hours" before the first multicasting in order to successfully deliver the video to the users using the FVOD or NVOD system (See Ganek Figs. 5a and 5b).

Regarding claim 9, the "predetermined schedule" includes multiple fixed start times for the video, wherein multicasting according to the multiple fixed start times overlap in time (See Ganek Figs. 5a and 5b).

Regarding claim 10, Ganek in view of Brown discloses "dynamically initiating transmission of the first portion of the video" as discussed in claim 3 above. Furthermore, Ganek discloses that the "first portion of the video is multicast over the network" (second multicasting) (See Ganek column 3 line 66 – column 5 line 67).

Regarding claim 11, the "first multicasting" is over primary channels or "one set of channels pre-assigned for multicasting" (See Ganek column 3 line 66 – column 5 line 67).

Regarding claim 12, the "first portion of the video" is dynamically transmitted over secondary channels or "a second set of channels" (See Ganek column 3 line 66 – column 5 line 67).

Regard claim 14, the video inherently includes the "front-most portion" where the "first portion" includes the beginning portion of the video or "front-most portion" (See Ganek column 3 line 66 – column 4 line 32).

Regarding claim 16, the "first" multicasting" and the dynamically initiated transmission are both served from a same server (See Ganek Fig. 1, VOD-sever 100).

Regarding claim 17, the user receives and buffers the second portion of the video while receiving and viewing the at least some of the first portion of the video, and then views the buffered second portion of the video, time shifted, to thereby seamlessly view the at least some of the first portion of the video and the second portion of the video (See Ganek column 5 lines 29-67).

Regarding claim 18, the "user pauses and resumes viewing of the video at will without incurring additional resource expenditure by any server or network element involved in the first multicast or the dynamically initiated transmission" by using the buffer and jumping to other NVOD streams (See column 9 lines 5-15).

Regarding claim 19, Ganek in view of Brown discloses that the user can perform VCR like functions "without incurring additional resource expenditure by any server or network element involved in the first multicast or the dynamically initiated transmission" as discussed in claim 18 above. However, Ganek in view of Brown does not explicitly disclose a "slow motion" function.

Official Notice is taken that is well known for VCR like commands to include a slow motion function. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the VCR type controls disclosed by Ganek in view of Brown to include a slow motion function in order to expand the capabilities of the system thereby giving the users more options to control the video.

Regarding claim 20, the "user can seek to an approximate new point in the video at will without incurring additional resource expenditure by any server or network element involved in the first multicast or the dynamically initiated transmission" by jumping to another NVOD stream or using the buffer (See Ganek column 9 lines 5-15), and wherein "the user can seek to a precise new point in the video at will but will require an additional dynamically initiated transmission from a server (See Brown column 3 lines 31-51).

Claim 23 contains the limitations of claims 1 and 3 (wherein the user can request a VOD version of the request program thereby dynamically initiating transmission of a portion of the video, where in the dynamically initiated transmission is a multicast as discussed above) and is analyzed as previously discussed with respect to those claims.

Claim 24 contains the limitations of claims 7 and 23 and is analyzed as previously discussed with respect to those claims.

Regarding claim 25, the FVOD/NVOD system disclosed by Ganek in view of Brown has "start times for any given multicast in the earlier determined schedule are not in response to any arrival of a user who will receive the given multicast, whereby even if no user is expected to watch the given multicast, the given multicast still takes place at its earlier determined start time" (See Ganek Figs. 5a and 5b).

Regarding claim 26, "multiple prefix servers" are not used in conjunction with the dynamically multicasting because all requests are served by VOD-server 100 (See Ganek Fig. 1).

Claim 28 contains the limitations of claims 16 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 29 contains the limitations of claims 1 and 3 (wherein if the user chooses to receive the NVOD version of the program, then the wait time is within the user's "threshold time parameter". Otherwise, if the wait is too long for the user, the user can request a VOD version of the program) and is analyzed as previously discussed with respect to those claims. Furthermore, Ganek in view of Brown discloses that server has a controller that is able to receive user requests and send instructions to other components in the server in order to fulfill the requests (See Brown Fig. 4, processors; column 5 lines 4-30). Inherently the processor of the server receives a message or flag or "confirmation" indicating that a "dynamically scheduled transmission" is being arranged to deliver the video to the user in order for the processor to successfully monitor the load the of VOD services.

Claim 31 contains the limitations of claim 1 and 3 (wherein if the user chooses to receive the NVOD version of the program, then the wait time is within the user's "threshold parameter". Otherwise, if the wait is too long for the user, the user can request a VOD version of the program) and is analyzed as previously discussed with respect to those claims.

Claim 32 contains the limitations of claims 7 and 31 and is analyzed as previously discussed with respect to those claims.

Claim 33 contains the limitations of claims 9 and 31 and is analyzed as previously discussed with respect to those claims.

Claim 34 contains the limitations of claims 10 and 31 and is analyzed as previously discussed with respect to those claims.

Claim 36 contains the limitations of claims 3 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 37 contains the limitations of claims 24 and 36 and is analyzed as previously discussed with respect to those claims.

Claim 38 contains the limitations of claims 25 and 36 and is analyzed as previously discussed with respect to those claims.

Claim 39 contains the limitations of claim 29 and is analyzed as previously discussed with respect to that claim.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ganek et al. (US005724646A) in view of Brown (US005771435A) and Ebisawa (US006144400A).

Claim 41 contains the limitations of claims 3, 23, and 29 (wherein the system is served by "at least one server" (See Ganek Fig. 1) and the user requesting the VOD version of the program is known as the "dynamic user") and is analyzed as previously discussed with respect to those claims. However, Ganek or Brown does not explicitly disclose that the "first portion of the video includes video content not within the second portion of the video".

Ebisawa discloses a NVOD system that delivers requested videos to user. Ebisawa discloses that the system splits the video into two portions. For example, a 60-

minute video is split into one 10-minute beginning portion and a 50-minute remainder portion of the video or "first portion of the video includes video content not within the second portion of the video". The system transmits the portions separately (See Figs. 2-4; column 3 line 22 – column 4 line 40). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the primary channels and programs disclosed by Ganek to transmit only the remainder portion of the program, as taught by Ebisawa, in order to avoid sending duplicate data across the bandwidth thereby freeing up more bandwidth to use for delivering more programs.

Allowable Subject Matter

3. Claims 4-6, 13, 15, 21, 22, 27, 30, 35, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4-6, the prior art of record fails to show or fairly suggest that the waiting time is according to an adjustable threshold parameter that is adjusted to effect the usage of transmission resources, to attempt to equalize an expected average waiting time, or along a continuum for graceful degradation of waiting-time performance as number of users increases.

Regarding claims 13 and 35, the prior art of record fails to show or fairly suggest that the number of channels in the second set of channels is allocated to be at least about the number of channels in the first set of channels.

Regarding claims 15 and 27, the prior art of record fails to show or fairly suggest patching multicast for continuing a front-most portion of the video that was stored at one of multiple prefix storage sites.

Regarding claim 21, the prior art of record fails to show or fairly suggest a controller that sends fewer indications to the server than the multiple received requests received by the controller.

Regarding claim 22, the prior art of records fails to show or fairly suggest that the system computes and outputs an approximate expected average wait time based on proposed system parameters, the user arrival rates, and using a performance model.

Regarding claims 30 and 40, the prior art of record fails to show or fairly suggest that the controller refrains from sending additional requests toward the server until a confirmation has been received and then sending a request to increase the amount of the video to include in the new multicast for the video.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please take note of Yu (US005561456A), Arsenault et al. (US006701528B1), and Kochanski (US005512934A) for their similar methods of scheduling delivery of on-demand videos.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-7383. The examiner can normally be reached on M-F 7:30-5PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGU
November 10, 2005

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